

WHAT IS CLAIMED IS:

1. A semiconductor pressure sensor device, comprising:

a semiconductor sensor substrate having one and other main surfaces facing and

5 being in parallel with each other; and

a support member on which said semiconductor sensor substrate is mounted,

wherein

said semiconductor sensor substrate comprises

a thin part constituting a diaphragm;

10 a thick part surrounding said thin part;

a strain gage element formed on a surface of said diaphragm in a side of said one main surface, for detecting a pressure; and

a first concave part formed by said thin part and said thick part, having an opening part in said other main surface, and whose bottom part corresponds to said thin

15 part, wherein

said support member comprises

a second concave part, wherein

said support member is fixed on said thick part of said semiconductor sensor substrate in a side of said other main surface so that an opening part of said second concave part faces with said opening part of said first concave part and has a positional relationship to be included in said opening part of said first concave part in a plane view.

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2. The semiconductor pressure sensor device according to claim 1, wherein a

thickness of said thick part of said semiconductor sensor substrate is no fewer than 150

25 μm , nor more than 250 μm .

3. The semiconductor pressure sensor device according to claim 2, wherein a depth of said second concave part of said support member is no fewer than 150 μm .

4. The semiconductor pressure sensor device according to claim 1, wherein
5 sections of said opening parts of said first and second concave parts have a rectangular shape, respectively.